ENCAPSULATION METHOD AND APPARATUS FOR COMMUNICATING FIXED-LENGTH DATA PACKETS THROUGH AN INTERMEDIATE NETWORK

5   ABSTRACT

A method (400, 700) and apparatus (500, 700) for communicating fixed-length data packets through an intermediate computer network. The method (400) comprises receiving a data packet characterized by a fixed-length packet format. The method (400) comprises constructing (435) a remnant packet characterized by the fixed-length packet

5   format, which includes inserting (455) at least a portion of the data packet routing information in the data field of the remnant packet. The method (400, 700) also comprises communicating (470, 710) the remnant packet. The method (700) comprises receiving (710) the remnant packet and constructing (755) a reconstructed data packet, which includes inserting (765) data packet routing information obtained from the remnant

10   packet, in the address field of the reconstructed packet. The apparatus (500, 800) comprises a communication network node (500) comprising a receiver (510), transmitter (520), computer memory (540) and processor (530). The receiver (510) receives data packets characterized by the fixed-length packet format. The processor (530) receives a data packet from the receiver and constructs a remnant packet characterized by the fixed-

15   length packet format in which the data field includes data packet routing information. The processor (530) sends the remnant packet through the intermediate network via the

transmitter (520). The apparatus (500, 800) also comprises a second communication

network node (800) comprising a receiver (810), transmitter (820), computer memory

(840) and processor (830). The receiver (810) receives a remnant packet, and the

20   processor (830) constructs a reconstructed data packet characterized by the fixed-length

packet format, where the address field of the reconstructed data packet includes data

packet routing information obtained from the data field of the remnant packet.